

Applicant: David K. Mesecher
Application No.: I-2-0108.3US

IN THE THE CLAIMS:

1. (currently amended) A base station having a plurality of transmitting antennas, the base station comprising:

means for transmitting from each transmitting antenna, a reference signal having a code uniquely associated with that antenna, wherein the transmitted reference signals are not delayed with respect to each other; and

means for transmitting a data signal such that different spread spectrum versions of the data signal are transmitted from each antenna, each data signal version having a different code for the respective transmitting antenna and the data signal versions are not transmission channel compensation processed; and

wherein the base station transmissions are in a time division duplex format
and weights derived from received versions of the reference signals are used to
weight received versions of the data signal versions prior to combining the weighted
received data signal versions.

2. (original) The base station of claim 1 wherein the means for transmitting a data signal transmits a plurality of data signals, such that spread spectrum versions of each data signal are transmitted from each antenna, each version having a different code for the respective transmitting antenna.

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3. (original) The base station of claim 2 wherein each version has a different code than the code for any of the versions of the plurality of data signals.

4. (canceled).

5. (currently amended) A base station comprising:
a plurality of transmitting antennas for transmitting a plurality of reference signals and data signal versions, each transmitting antenna operatively coupled to a reference signal generator and a mixer, wherein the transmitted reference signals are not delayed with respect to each other and the data signal versions are not transmission channel compensation processed;

a plurality of reference signal generators, each reference signal generator generating a code uniquely associated with its operatively coupled to antenna;

a data signal generator for producing a data signal; and

a plurality of mixers for producing the plurality of the data signal versions, each mixer for mixing the data signal with a different code to produce one of the versions for that mixer's coupled to antenna; and

wherein the base stations transmissions are in a time division duplex format
and weights derived from received versions of the reference signals are used to

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weight received versions of the data signal versions prior to combining the weighted received data signal versions.

6. (original) The base station of claim 5 further comprising at least one additional data signal generator for producing at least one additional data signal; for each at least one additional data signal generator, a plurality of mixers for producing a plurality of versions of that at least one additional data signal, each version having a different code for transmission over a respective transmitting antenna of the transmitting antennas.

7. (original) The base station of claim 5 wherein the base stations transmissions are in a time division duplex format.

8. - 18. (canceled).